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ABSTRACT

An investigation was conducted to compare the self-concept of 103 fifth-grade children from schools that practice a traditional educational philosophy to the self-concept of 94 fifth-grade children from schools that practice an open educational philosophy. All subjects were administered the Piers-Harris Self-Concept Scale for Children. Both treatment groups were divided into categories of high and low socioeconomic status and high and low IQ using a 2x2x2 factorial design to analyze the data. The data indicated that there was no significant difference between the open school group and the traditional school group in mean self-concept scores, thus not supporting the theory that an open educational philosophy promotes a more positive self-concept than a traditional educational philosophy. However, simple interaction analysis of the joint effects seemed to imply that children from a high socioeconomic area seem to benefit more from a school that practices an open educational philosophy, in terms of self-concept, than children from a low socioeconomic area. (Author)

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PUPILS' SELF-CONCEPT:

OPEN CLASSROOM ENVIRONMENT VERSUS TRADITIONAL CLASSROOM ENVIRONMENT

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PUPILS' SELF-CONCEPT:

OPEN CLASSROOM ENVIRONMENT VERSUS TRADITIONAL CLASSROOM ENVIRONMENT

ABSTRACT

An investigation was conducted to compare the self-concept of one hundred three fifth grade children from schools that practice a traditional educational philosophy to the self-concept of ninety-four fifth grade children from schools that practice an open educational philosophy. All subjects were administered the Piers-Harris Self Concept Scale for Children. Both treatment groups were divided into categories of high and low socioeconomic status and high and low IQ using a two by two by two (2 x 2 x 2) factorial design to analyze the data. The data indicated that there was no significant difference between the open school group and the traditional school group in mean self-concept scores, thus not supporting the theory that an open educational philosophy promotes a more positive self-concept than a traditional educational philosophy. However, simple interaction analysis of the joint effects seemed to imply that children from a high socioeconomic area seem to benefit more from a school that practices an open educational philosophy, in terms of self-concept, more than children from a low socioeconomic area.

A new movement has arisen in American Education during the past decade. This movement has been referred to by various names: open classroom; open learning environment; and open space classroom, just to list a few of the current titles. This movement, evolving from the current British informal education, is much in the focus of American society today with questions as to the cognitive and affective benefits for the child and what type of child would benefit most from an open classroom environment.

Since school represents an important segment of the real world to a child, and it is in this setting that he learns how to view himself and others, as well as academic subjects, the effect of the open classroom on a child's self-concept needs to be studied. Furthermore, research studies conducted in this area have presented contradictory conclusions. It is for these reasons that this researcher was motivated to conduct this study and add more information about the open classroom. Specifically, the purpose of this investigation was to compare the self-concept of fifth grade children in an open classroom environment to the self-concept of fifth grade children in a traditional classroom environment.

Definitions

The term self-concept has been defined as those perceptions, beliefs, attitudes, and values one accepts as descriptive of oneself -- implying that self-concepts are based upon one's perceptions of others' responses to him, as well as his own perception of his characteristics and abilities (10). Specifically, for this study, one's attitudes toward his behavior, intellectual and school status, physical appearance and attributes, anxiety, popularity, and, happiness and satisfaction were indicative of one's self-concept.

A traditional classroom environment is one in which all children of approximately the same age are placed in a classroom and labeled as one grade level. Each child has his own desk where he spends most of the day. Although children are grouped for reading, they all do basically the same academic and nonacademic activities as prescribed by the teacher.

An open classroom environment refers to a new approach to teaching that discards the familiar elementary classroom setup and the traditional, stylized roles of teacher and pupil, for a far freer, highly individualized, child-centered learning experience (4). Its learning environment is conducive to discovery, manipulation, communication, and enjoyment of learning.

Review of the Literature

Although open education is quite new to the United States, a deluge of literature has been written on it since its implementation in the 1960's. Most of the literature written by the advocates of open education indicate justifiable claims that this type of education is more beneficial for the child than traditional education.

Fauquet (3) presents a firm opinion praising the open education movement as one that represents an important effort on the part of educators to educate for the healthy personality. Hertzberg and Stone (6) suggest that it is both the physical and emotional elements of the open school environment that enable a child to learn to experiment without fear of failure, to deal not only with his own feelings and attitudes, but with the feelings and attitudes of his peers, and above all, to learn what he is. Rathbone (12) claims that operating in an open environment that assumes that every child has the innate capacity and urge to make sense of the world and to make meaningful decisions concerning his own activities in that world has positive effects on the child. Ruedi and West (14) add that in an open environment classroom where the student is encouraged to set goals which have meaning for him, the student gains a sense of accomplishment that gives him a positive view of himself and his environment.

An atmosphere of acceptance, respect, and freedom prevails in open schools. By accepting the child, his

errors, his fantasies, and his present and past, the teacher encourages the child to accept himself. In this way the child gains self-esteem, a feeling of worth, and a sense of independence (12). Weber (19) acclaims open education for its practice in accepting and respecting each child as an individual, and continually involving him in active social participation and interchange with those who love can build up in a child a confidence in his own future and in himself. Barth (1) assumes that opportunities to explore, to try and fail in the absence of threat, contribute to a sense of mastery and the development of a child's knowledge. He intimates that there seems to be a relationship between knowing oneself and self-esteem, and this self-esteem is crucial for learning. Barth emphasizes the point that a strong self-concept on the part of the child is an essential part of open education.

Research Studies

There have been a paucity of research studies relating to the open classroom and self-concept. However, the studies that have been done in this area reveal contradictory findings and raise additional questions.

From the data collected by Heimgartner (5), it was concluded that children in open space had greater identification with the group, had an increase in self-esteem, did not view themselves differently in the relationship of their size to that of an adult, and did not identify with any one particular teacher. The results of a quasi-experimental research

study conducted by Singh (16) revealed that pupils in open classrooms had better self-concepts, liked school better, scored better on achievement tests, and had fewer days absent from school.

Two research studies comparing children in open space and traditional schools were conducted in Canada (20,13). In both studies it was concluded that open space pupils had a higher self-esteem and a more positive attitude toward learning and school than traditional pupils.

Several research studies have indicated no significant difference or a loss in self-concept between pupils in open and traditional schools. Analysis of the self-concept post-test in a study conducted by Lovin (8) showed a significant difference between both groups, in favor of the traditional group, as well as a loss in self-concept as learners by the open space group. The pupils in the open space school had a more positive attitude toward the school's physical environment. Lower self-concept scores for open space pupils was also the results of a study designed by Sackett (15).

There was no significant difference in mean self-concept scores between open and traditional pupils in studies conducted by Ruedi & West, Kohler, or Tuckman (14, 7, 17). In two of these studies, however, the open space children had a more positive attitude toward school than those children in the traditional schools. In Kohler's study, no correlations were found between a school's openness and the

students' self-concept.

It would seem safe to conclude from the studies reviewed above that most children in an open classroom environment appear to have a positive attitude toward school. However, as far as attitude toward learning and overall self-concept, the literature and research have not produced either consistent or conclusive evidence. Furthermore, several of the researchers whose studies were just reviewed indicated the necessity for more research studies done in the area of self-concept in open and traditional schools, using a different geographical area and a different sample of the population (15, 14). The investigation reported here was an effort in that direction, as well as controlling independent variables not controlled in previous studies: levels of socioeconomic status and intelligence.

Hypotheses

The null hypotheses in this study were:

(1) There will be no significant difference between the open classroom group and the traditional classroom group in overall self-concept scores on the Piers-Harris Children's Self Concept Scale.

(2) There will be no significant difference in overall self-concept scores of children in both groups from a lower socioeconomic area and children in both groups from a higher socioeconomic area.

(3) There will be no significant difference in overall self-concept scores of children in both groups with a higher IQ and children in both groups with a lower IQ.

(4) There will be no difference in overall self-concept scores of children in the open classroom group from a low socioeconomic area and children in the traditional classroom group from a low socioeconomic area.

(5) There will be no difference in overall self-concept scores of children in the open classroom group with a lower IQ and the scores of children in the traditional classroom group with a lower IQ.

Selection of Subjects

This study took place in a suburban area of the Baltimore County Public School System in Maryland. Three schools that practice an open educational philosophy and four schools that practice a traditional educational philosophy, located in high and low economic areas, agreed to participate in the study.

The guidance counselor from each of the schools randomly selected school records of fifth grade students in their school from which IQ data based on the Short Form Test of Academic Aptitude was obtained. Socioeconomic status information was obtained from county records, which provided the median family income of each participating school (1970

census). The schools whose median income was $10,129 or less, constituted the low socioeconomic group. The schools whose median income was $13,259 or above, constituted the high socioeconomic group.

The IQ and socioeconomic status information from the open space schools and the traditional schools were both arranged into the following four groupings: (1) children with an IQ above 100 and from a high socioeconomic area; (2) children with an IQ of 100 or below and from a high socioeconomic area; (3) children with an IQ above 100 and from a low socioeconomic area; (4) children with an IQ of 100 or below and from a low socioeconomic area. Hence, a sample of ninety-four open space children in the fifth grade and one hundred three traditional school children in the fifth grade was obtained.

It was at least the fourth year in an open environment for eighty-three per cent of the pupils in the open environment group. All of the pupils in the traditional schools attended the traditional schools since they were in kindergarten or first grade.

Data Collection

The Piers-Harris Children's Self Concept Scale was administered to all subjects in each participating school. Prior to the testing week, a name slip was stapled to each test booklet. On the space provided for the child's name,

the student's identification number was written. In this way each child's identity would be known to the researcher only through his student number. Furthermore, it was explained to the children that their names would not be known to the researcher, thereby perhaps feeling more at ease to answer honestly. Therefore, the name slips were removed by each child once he received his booklet. It was also stressed that this was not a test, that there were no right or wrong answers, and that results would not affect their school grades. Each declarative statement in the booklet was read aloud by the researcher, allowing two to three seconds for all subjects to circle the yes or no response to each item.

Data Processing and Analysis

Each scale booklet was scored according to the manual and by using the scoring key for the Piers-Harris Children's Self Concept Scale, thus yielding one overall self-concept score per child. The children's scores were then statistically analyzed. A data matrix of the group combination is shown in Table 1.

A two by two by two (2 x 2 x 2) factorial design utilizing analysis of variance procedures was used to determine the variability between groups and the variability within groups. Significance of the F-ratio at the .05 level was required for rejection of the null hypotheses.

An AVAR 23 (18) three-way analysis of variance, fixed effects, was first used to examine the effects.

Table 1

Data Matrix of Group Combinations

		C_1	C_2
A_1	B_1	X N=24	X N=20
	B_2	X N=24	X N=26
A_2	B_1	X N=32	X N=16
	B_2	X N=30	X N=25

A_1 = open classroom environment group

A_2 = traditional classroom environment group

B_1 = high socioeconomic status

B_2 = low socioeconomic status

C_1 = IQ above 100

C_2 = IQ of 100 and below

X = scores of subjects within cells

However, cell sizes were unequal, causing negative sums of squares to occur, probably in the open/traditional main effects or the ABC interaction. This happened because the computer program uses formulas which are approximate solutions to the ANOVA for unequal N. Therefore, the unweighted means analysis ANOVA with adjustments to the sums of squares by the harmonic mean of the cell sizes was used (2). Formulas from Dayton were used on a Hewlett-Packard 9100B Programmed Calculator to analyze significant values and examine the effects.

Analysis and Evaluation

A summary of the data obtained in the major investigation of this project (self-concept scores) is shown in Table 2. A summary of the analysis of variance on this data is presented in Table 3. A summary of simple interaction analysis is shown in Table 4.

The results of the investigation involving the main effects were:

(1) The null hypothesis of no significant difference between the open classroom group and the traditional classroom group in overall mean self-concept scores was accepted ($p > .05$). In this case, the theory that an open educational philosophy promotes a more positive self-concept than a traditional educational philosophy was not supported.

(2) The null hypothesis of no significant difference in overall self-concept scores of children in both

Table 2

A Summary of Mean Self-Concept Scores of Each Treatment Combination

		C_1	C_2
A_1	B_1	64.542	58.600
	B_2	53.667	42.846
A_2	B_1	58.813	55.500
	B_2	57.033	52.120

A_1 = open classroom environment group

A_2 = traditional classroom environment group

B_1 = high socioeconomic group

B_2 = low socioeconomic group

C_1 = IQ above 100

C_2 = IQ of 100 and below

Table 3

A Summary of the Analysis of Variance (Self-Concept Scores)

Source of Variation	Degrees of freedom	Sum of Squares	Mean Square	F*	Significance**
A (Open/Traditional)	1	42.847	42.847	0.219	NS
B (High/Low SES)	1	2958.382	2958.382	15.131	SIG
C (High/Low IQ)	1	1842.668	1842.668	9.425	SIG
AB	1	1383.724	1383.724	7.077	SIG
AC	1	215.083	215.083	1.100	NS
BC	1	147.473	147.473	0.754	NS
ABC	1	8.097	8.097	0.041	NS
Experimental Error	189	36951.896	195.513	-	
Total	196				

* critical F = 5.18

** .05 level of significance

Table 4

Simple Interaction Analysis of Data on Mean Self-Concept Scores

	Open	Traditional
High SES	61.841	57.709
Low SES	48.040	54.800

	Open	Traditional
High IQ	59.104	57.923
Low IQ	50.723	53.810

groups from a lower socioeconomic area and children in both groups from a higher socioeconomic area (1970 census data) was rejected ($p < .05$). This indicates that children from a high socioeconomic area have a more positive self-concept.

(3) The null hypothesis of no significant difference in overall self-concept scores of children in both groups with a higher IQ and children in both groups with a lower IQ was rejected ($p < .05$). This indicates that children with a high IQ have a more positive self-concept. (See Table 3).

Simple interaction analysis revealed the following results of the hypotheses testing:

(1) The null hypothesis of no difference in mean overall self-concept scores of children in the open classroom group from a low socioeconomic area and children in the traditional classroom group from a low socioeconomic area was accepted.

(2) The null hypothesis of no difference in mean overall self-concept scores of children in the open classroom group with a lower IQ and the mean scores of children in the traditional group with a lower IQ was accepted. (See Table 4).

These last two findings seem to imply that children from a low socioeconomic area or with a low IQ would not benefit more from an open classroom environment than a

traditional classroom environment.

The results of the investigation on the interaction (joint effects) from an analysis of variance revealed that there was a difference between the mean self-concept scores of SES open classroom groups, but no difference between the means of high and low SES traditional classroom groups (See Table 4). In the open classroom group, high SES means were greater than low SES means. For the traditional classroom group, there were no differences. Based on this finding, it seems that children from a high socioeconomic area seem to benefit more from a school that practices an open educational philosophy, in terms of self-concept, more than children from a low socioeconomic background.

Recommendations

With the continued controversy of open educational philosophy versus more traditional educational philosophy and the question as to what type of child would benefit more from either educational philosophy, further studies such as the one conducted here need to be undertaken. The scope of this study was limited to one county school district. Future studies should include widespread geographical areas where children attending open and/or traditional schools in high and low socioeconomic areas can be tested. More experimentation and investigation should concern itself with children attending open schools in low socioeconomic areas. These studies should be longitudinal and examine students prior,

during, and for a number of years after participating in an open educational program in order to assess the long-range benefits of open education, as well as to lead to possible alterations of the program in low socioeconomic areas. The necessity of more research conducted in this area is sufficiently documented by the implications of this study.

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